

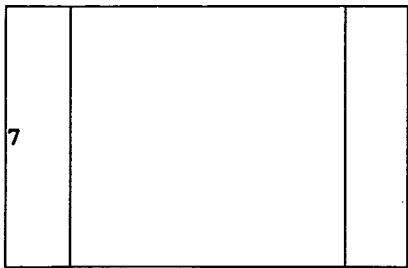
| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|--------|---------------|------------------------------------|------------------|---------|------------------|
| L1 | 6 | "10127939" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 07:37 |
| L2 | 400 | 560/224.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 07:36 |
| L3 | 0 | I1 and I2 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 07:36 |
| L4 | 437415 | recover? | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 07:38 |
| L5 | 756898 | catalyst | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 07:38 |
| L6 | 5470 | I4 near3 I5 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 07:38 |
| L7 | 5 | I2 and I6 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:52 |
| L8 | 227232 | chromium | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 07:42 |
| L9 | 23 | I2 and I8 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:35 |
| L10 | 3 | I6 and I9 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 08:01 |
| L11 | 1 | "02100814" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 08:02 |
| L12 | 2 | "02076919" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 08:07 |

| | | | | | | |
|-----|---------|-------------------|---|----|----|------------------|
| L13 | 1870247 | resin | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:35 |
| L14 | 14 | I9 and I13 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:35 |
| L15 | 8 | ("4243818").URPN. | USPAT | OR | ON | 2005/02/01 09:51 |
| L16 | 182 | I6 same I13 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:52 |
| L17 | 3 | I2 and I16 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:54 |
| L18 | 700 | I6 and I8 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:54 |
| L19 | 3 | I2 and I18 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 09:54 |
| L20 | 0 | 2001-87846 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 10:21 |
| L21 | 9 | "087846" | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 12:18 |
| L22 | 0 | "10436662".pn. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 12:23 |
| L23 | 2 | "6465681".pn. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 12:24 |
| L24 | 2 | "6660881".pn. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/02/01 12:24 |

| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments |
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| 1 | BRS | L1 | 6 | "10127939" | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 07:37 | |
| 2 | BRS | L2 | 400 | 560/224.ccls. | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 07:36 | |
| 3 | BRS | L3 | 0 | 11 and 12 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 07:36 | |
| 4 | BRS | L4 | 437415 | recover? | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 07:38 | |
| 5 | BRS | L5 | 756898 | catalyst | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 07:38 | |
| 6 | BRS | L6 | 5470 | 14 near3 15 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 07:38 | |

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| 7 | BRS | L7 | 5 | 12 and 16 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 09:52 | |
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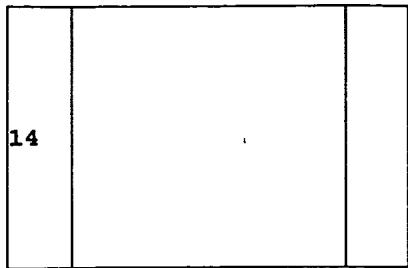
| | Error Definition | Errors |
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| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |



| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments |
|----|------|-----|-------------|-------------|--|---------------------|----------|
| 8 | BRS | L8 | 227232 | chromium | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 07:42 | |
| 9 | BRS | L10 | 3 | 16 and 19 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 08:01 | |
| 10 | BRS | L11 | 1 | "02100814" | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 08:02 | |
| 11 | BRS | L12 | 2 | "02076919" | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 08:07 | |
| 12 | BRS | L9 | 23 | 12 and 18 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 09:35 | |
| 13 | BRS | L13 | 187024 7 | resin | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 09:35 | |

| | | | | | | | |
|----|-----|-----|----|------------|--|---------------------|--|
| 14 | BRS | L14 | 14 | 19 and 113 | US- PGPUB ; USPAT ; EPO ; JPO ; DERWEN T | 2005/02/01 09:35 | |
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| | Error Definition | Err ors |
|----|-------------------------|--------------------|
| 8 | | |
| 9 | | |
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| 12 | | |
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| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments |
|----|------|-----|------|-------------------|--|---------------------|----------|
| 15 | BRS | L15 | 8 | ("4243818").URPN. | USPAT | 2005/02/01 09:51 | |
| 16 | BRS | L16 | 182 | 16 same 113 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 09:52 | |
| 17 | BRS | L17 | 3 | 12 and 116 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 09:54 | |
| 18 | BRS | L18 | 700 | 16 and 18 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 09:54 | |
| 19 | BRS | L19 | 3 | 12 and 118 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 09:54 | |
| 20 | BRS | L20 | 0 | 2001-87846 | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 10:21 | |
| 21 | BRS | L21 | 9 | "087846" | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 12:18 | |

| | Error Definition | Errors |
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| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments |
|----|------|-----|------|----------------|--|---------------------|----------|
| 22 | BRS | L22 | 0 | "10436662".pn. | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 12:23 | |
| 23 | BRS | L23 | 2 | "6465681".pn. | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 12:24 | |
| 24 | BRS | L24 | 2 | "6660881".pn. | US- PGPUB; USPAT; EPO; JPO; DERWEN T | 2005/02/01 12:24 | |

| | Error Definition | Err ors |
|----|-------------------------|--------------------|
| 22 | | |
| 23 | | |
| 24 | | |

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0.21

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FILE COVERS 1907 - 1 Feb 2005 VOL 142 ISS 6
FILE LAST UPDATED: 31 Jan 2005 (20050131/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> ?acrylic acid
291108 ?ACRYLIC
3930450 ACID
1462301 ACIDS
4404727 ACID
(ACID OR ACIDS)
L1 163500 ?ACRYLIC ACID
(?ACRYLIC(W)ACID)

=> alkylene oxide
54405 ALKYLENE
336 ALKYLENES
54649 ALKYLENE
(ALKYLENE OR ALKYLENES)
1533418 OXIDE
323292 OXIDES
1625989 OXIDE
(OXIDE OR OXIDES)
L2 9945 ALKYLENE OXIDE
(ALKYLENE(W)OXIDE)

=> l1(1)L2
L3 408 L1(L)L2

=> CATALYST(1) recover?
678987 CATALYST
682349 CATALYSTS
870062 CATALYST
(CATALYST OR CATALYSTS)
596657 RECOVER?
L4 20927 CATALYST(L) RECOVER?

=> l3 and l4
L5 3 L3 AND L4

=> d 15 1-3 ti fbib abs

L5 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Recovery of chromium-type catalyst used in synthesis of hydroxyalkyl (meth)acrylate from (meth)acrylic acid and alkylene oxides

AN 2004:1076445 CAPLUS

DN 142:37700

TI Recovery of chromium-type catalyst used in synthesis of hydroxyalkyl (meth)acrylate from (meth)acrylic acid and alkylene oxides

IN Takagi, Hiroyuki; Ishida, Tokumasa; Uemura, Masahiro

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------|-------|----------|----------------------------------|------------------------|
| ----- | ----- | ----- | ----- | ----- |
| PI JP 2004351415 | A2 | 20041216 | JP 2004-133894 JP 2003-128292 | 20040428 A 20030506 |

AB The invention refers to a method of recovering Cr-type catalysts used in synthesis of hydroxyalkyl (meth)acrylate from (meth)acrylic acid and alkylene oxides, wherein water or an alkali solution is added to the reaction fluid or residue after the hydroxyalkyl (meth)acrylate is extracted, and the solids are separated from solution

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Catalytic esterification process for the production of hydroxyalkyl (meth)acrylates from (meth)acrylic acids and epoxides

AN 2004:120625 CAPLUS

DN 140:181961

TI Catalytic esterification process for the production of hydroxyalkyl (meth)acrylates from (meth)acrylic acids and epoxides

IN Takaki, Hiroyuki; Ishida, Tokumasa; Uemura, Masahiro

PA Nippon Shokubai Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 14 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------|-------|----------|---|---------------------------------------|
| ----- | ----- | ----- | ----- | ----- |
| PI US 2004030180 | A1 | 20040212 | US 2003-633139 JP 2002-234630 | 20030801 A 20020812 |
| JP 2004075559 | A2 | 20040311 | JP 2002-234630 | 20020812 |
| EP 1389610 | A1 | 20040218 | EP 2003-17427 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | 20030801 JP 2002-234630 A 20020812 |
| CN 1483718 | A | 20040324 | CN 2003-127768 JP 2002-234630 | 20030812 A 20020812 |

AB Hydroxyalkyl (meth)acrylates (e.g., hydroxyethyl acrylate) are prepared in a process in which: the diffusion of harmful substances due to disposal of catalysts can be reduced; and also the amount of the catalyst as used can be greatly saved in the entire production process. This process comprises carrying out an esterification reaction between (meth)acrylic acid and an alkylene oxide (e.g., ethylene oxide) in the presence of a catalyst in order to produce the hydroxyalkyl (meth)acrylate; with the production process being characterized by further comprising the step of recovering the catalyst which has been used for the reaction.

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

TI Hydroxyalkyl acrylate or methacrylate

AN 1969:67656 CAPLUS
 DN 70:67656
 TI Hydroxyalkyl acrylate or methacrylate
 IN Murayama, Masayuki
 PA Japan Gas-Chemical Co., Inc.
 SO Jpn. Tokkyo Koho, 3 pp.
 CODEN: JAXXAD
 DT Patent
 LA Japanese
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------------------|------|----------|-----------------|----------|
| PI | JP 43018890 DE 1568838 | B4 | 19680816 | JP DE | 19641017 |

AB The title compds. are prepared from alkylene oxide and acrylic acid or methacrylic acid in the presence of 0.2-5 weight % Fe³⁺ as the main catalyst and metal or metal compound such as Cu, Hg, Cr or iodine (0.01-2 times main catalyst). Thus, 360 g. acrylic acid, 0.2 g. tannic acid, 4 g. FeCl₃, and 0.1 g. Cu powder were charged in a reactor and heated at 80° under N₂; ethylene oxide was passed through at a rate of 150 g./hr. for 2 hrs. Excess ethylene oxide was cooled and recovered from the reactor to yield 95% hydroxyethyl acrylate, unreacted acrylic acid 0.2 weight %, and recovered ethylene oxide 70 g.

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COST IN U.S. DOLLARS

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| 21.09 | 21.30 |

FULL ESTIMATED COST

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|--|---------------------|------------------|
| CA SUBSCRIBER PRICE | -2.19 | -2.19 |

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FILE 'CAPLUS' ENTERED AT 08:20:30 ON 01 FEB 2005
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| SINCE FILE ENTRY | TOTAL SESSION |
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|---------------------|------------------|

FULL ESTIMATED COST

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| 21.09 | 21.30 |
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

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COST IN U.S. DOLLARS

| SINCE FILE ENTRY | TOTAL SESSION |
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| | | |
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| FULL ESTIMATED COST | 21.09 | 21.30 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -2.19 | -2.19 |

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FILE COVERS 1907 - 1 Feb 2005 VOL 142 ISS 6
FILE LAST UPDATED: 31 Jan 2005 (20050131/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 11

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:235395 CAPLUS
DN 134:269412
TI Process and apparatus for continuous casting of steel slab
IN Itoyama, Seji; Shibata, Hiromitsu; Kishimoto, Yasuo
PA Kawasaki Steel Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
COPEN: JXXXXE

CODEN: JIAKAF
DT Patent
LA Japanese
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2001087846 A2 20010403 JP 1999-268199 19990922 <--
PRAI JP 1999-268199 19990922

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 10:48:26 ON 01 FEB 2005